

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

June 2001

BUDGET ACTIVITY

**7 - OPERATIONAL SYSTEMS DEV**

PE NUMBER AND TITLE

**0305204A - Tactical Unmanned Aerial Vehicles**

| COST (In Thousands)                                   | FY 2000<br>Actual | FY 2001<br>Estimate | FY 2002<br>Estimate | FY 2003<br>Estimate | FY 2004<br>Estimate | FY 2005<br>Estimate | FY 2006<br>Estimate | FY 2007<br>Estimate | Cost to<br>Complete | Total Cost |
|---|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------|
| Total Program Element (PE) Cost                       | 45087             | 34110               | 38210               | 0                   | 0                   | 0                   | 0                   | 0                   | 0                   | 0          |
| 114 TACTICAL UNMANNED AERIAL VEHICLE (TUAV) (JMIP)    | 45087             | 31846               | 19503               | 0                   | 0                   | 0                   | 0                   | 0                   | 0                   | 0          |
| 11A ADVANCED PAYLOAD DEVELOPMENT & SUPPORT            | 0                 | 0                   | 16400               | 0                   | 0                   | 0                   | 0                   | 0                   | 0                   | 0          |
| 123 JOINT TECHNOLOGY CENTER SYSTEM INTEGRATION (JMIP) | 0                 | 2264                | 2307                | 0                   | 0                   | 0                   | 0                   | 0                   | 0                   | 0          |

## **A. Mission Description and Budget Item Justification:**

**PLEASE NOTE:** This administration has not addressed FY2003-2007 requirements. All FY 2003-2007 budget estimates included in this book are notional only and subject to change.

The Tactical Unmanned Aerial Vehicle (TUAV), provides Army brigades/battalions with dedicated day/night, reconnaissance, surveillance and target acquisition (RSTA) and intelligence. TUAV provides the tactical warfighting commander with critical battlefield information in the rapid cycle time required for success at the tactical level. The TUAV system consists of multiple air vehicles, each configured with an electro-optic (EO)/infrared (IR) sensor payload, ground control equipment, including communications equipment, launch and recovery equipment, remote video terminal, and High Mobility Multipurpose Wheeled Vehicles with trailer(s). Each system is supported by a maintenance section-multifunctional as well as a divisional Mobile Maintenance Facility capable of supporting up to four TUAV systems. This TUAV development effort provides systems for use in developmental test, Initial Operational Test and Evaluation and will provide systems to brigades as quickly as possible. Tactical Control System (TCS) software will be integrated with the TUAV system when available and validated. This effort also provides for development of advanced sensor payloads, including Synthetic Aperture Radar/Moving Target Indicator (SAR/MTI) for near all-weather capability and advanced EO/IR for improved detection and recognition.

The Joint Technology Center/System Integration Lab (JTC/SIL) is a joint integration center that develops simulations of tactical UAVs and strategic reconnaissance and imagery. It also utilizes the Modernized Imagery Exploitation System (MIES), the Enhanced Tactical Radar Correlator (ETRAC), and a variety of C4I systems and interfaces, namely the TCS. The Multiple Unified Simulation Environment (MUSE) system provides for the development of real-time, interoperable hardware and operator in-the-loop simulations of multiple intelligence systems that may be integrated with larger simulations in support of Service exercises. MUSE development provides a realistic operational environment that supports a wide range of information efforts.

This system supports the Legacy to Objective transition path of the Transformation Campaign Plan (TCP).

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| <b><u>B. Program Change Summary</u></b>       | FY 2000 | FY 2001 | FY 2002 | FY 2003 |
|---|---------|---------|---------|---------|
| Previous President's Budget (FY2001 PB)       | 43087   | 29427   | 14181   | 0       |
| Appropriated Value                            | 43866   | 34427   |         |         |
| Adjustments to Appropriated Value             | 0       | 0       |         |         |
| a. Congressional General Reductions           | 0       | 0       |         |         |
| b. SBIR / STTR                                | 0       | 0       |         |         |
| c. Omnibus or Other Above Threshold Reduction | -179    | 0       |         |         |
| d. Below Threshold Reprogramming              | 2000    | 0       |         |         |
| e. Rescissions                                | -600    | -317    |         |         |
| Adjustments to Budget Years Since FY2001 PB   | 0       | 0       | 24029   |         |
| Current Budget Submit (FY 2002/2003 PB )      | 45087   | 34110   | 38210   | 0       |

## Change Summary Explanation:

FY00 funds directed to higher Army priority

FY01 funding was increased (+5000) to fully fund the TUAV planned program in accordance with the Army Cost Position, and to initiate Advanced Payload Development efforts.

FY02 and FY03 funding was increased to fund TUAV advanced payload development and objective capability development efforts. (FY02+24029),(FY03+21708).

| ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)  |  |                   |                     |   |                     |                     | June 2001           |                     |                     |                     |            |
|--|--|-------------------|---------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------|
| BUDGET ACTIVITY<br>7 - OPERATIONAL SYSTEMS DEV   |  |                   |                     | PE NUMBER AND TITLE<br>0305204A - Tactical Unmanned Aerial Vehicles |                     |                     |                     |                     | PROJECT<br>114      |                     |            |
| COST (In Thousands)  |  | FY 2000<br>Actual | FY 2001<br>Estimate | FY 2002<br>Estimate   | FY 2003<br>Estimate | FY 2004<br>Estimate | FY 2005<br>Estimate | FY 2006<br>Estimate | FY 2007<br>Estimate | Cost to<br>Complete | Total Cost |
| 114  | TACTICAL UNMANNED AERIAL VEHICLE (TUAV) (JMIP) | 45087             | 31846               | 19503   | 0                   | 0                   | 0                   | 0                   | 0                   | 0                   | 0          |
| <p><b><u>A. Mission Description and Budget Item Justification:</u></b>The Tactical Unmanned Aerial Vehicle (TUAV), provides Army brigades/battalions with dedicated day/night, reconnaissance, surveillance and target acquisition (RSTA) and intelligence. TUAV provides the tactical warfighting commander with critical battlefield information in the rapid cycle time required for success at the tactical level. The TUAV system consists of multiple air vehicles, each configured with an electro-optic (EO)/infrared (IR) sensor payload, ground control equipment, including communications equipment, launch and recovery equipment, remote video terminal, and High Mobility Multipurpose Wheeled Vehicles with trailer(s). Each system is supported by a maintenance section-multifunctional as well as a divisional Mobile Maintenance Facility capable of supporting up to four TUAV systems. This TUAV development effort provides systems for use in developmental test, Initial Operational Test and Evaluation and will provide systems to brigades as quickly as possible. Tactical Control System (TCS) software will be integrated with the TUAV system when available and validated. This effort also provides for development of advanced sensor payloads, including Synthetic Aperture Radar/Moving Target Indicator (SAR/MTI) for near all-weather capability and advanced EO/IR for improved detection and recognition.</p> |  |                   |                     |   |                     |                     |                     |                     |                     |                     |            |
| <p><b><u>FY 2000 Accomplishments</u></b></p> <ul style="list-style-type: none"><li>21443 Tactical UAV LRIP I Program</li><li>2036 Government Furnished Equipment for 4 LRIP TUAV systems for development and IOT&amp;E</li><li>3727 Program Management Support</li><li>8550 Risk Reduction Testing/ST&amp;E/IOT&amp;E Preparation</li><li>2648 Advanced Payload Development / Modification / Integration</li><li>92 Tactical Common Data Link Integration</li><li>446 Objective Capability Assessment for Block Upgrades</li><li>1500 Incorporated baseline TUAV simulation into the MUSE to support TUAV TUCS embedded trainer and IMS trainer/Transitioned MUSE visualization component hardware and software to PC based platform</li><li>2320 Complete TUAV Ground Control Station Architecture</li></ul>  |  |                   |                     |   |                     |                     |                     |                     |                     |                     |            |

**ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)****June 2001**

BUDGET ACTIVITY

**7 - OPERATIONAL SYSTEMS DEV**

PE NUMBER AND TITLE

**0305204A - Tactical Unmanned Aerial Vehicles**

PROJECT

**114****FY 2000 Accomplishments (Continued)**

- 2075 Institutional Mission Simulator (IMS)
- 250 Tactical Control System

Total 45087

**FY 2001 Planned Program**

- 16786 Complete Tactical UAV Low Rate Initial Production (LRIP I) Program
- 3524 Program Management Support
- 4559 Risk Reduction Testing/Development Testing
- 1980 C4I Testing
- 1000 OPTEMPO Demonstration
- 810 Data Acquisition System (DAS) Instrumentation Van
- 750 IOT&E Preparation and Support/Travel
- 1200 Advanced Payload Development / Modification / Integration
- 500 Institutional Mission Simulator (IMS)
- 250 Tactical Control System
- 411 Objective Capability Development

Total 31770

**FY 2002 Planned Program**

- 2995 Program Management Support
- 10158 Objective Capability Development / Modification / Integration
- 1000 Update C4I Interfaces (EPLRS, FBCB2, A2C2, etc.)
- 4050 Objective Capability Testing / Limited User Testing
- 1300 30 Level Maintenance Training

Total 19503

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BUDGET ACTIVITY

7 - OPERATIONAL SYSTEMS DEV

PE NUMBER AND TITLE

0305204A - Tactical Unmanned Aerial Vehicles

PROJECT

114

## B. Other Program Funding Summary

|                           | FY 2000 | FY 2001 | FY 2002 | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | To Compl | Total Cost |
|---------------------------|---------|---------|---------|---------|---------|---------|---------|---------|----------|------------|
| TUAV Procurement (BA0330) | 800     | 37442   | 84300   | 0       | 0       | 0       | 0       | 0       | 0        | 0          |

Note: Other related Navy dollars fund the development of TCS software for integration into the TUAV under this project.

**C. Acquisition Strategy:** A System Capability Demonstration (SCD) was conducted with four contractors. The results from the SCD in conjunction with proposal evaluations resulted in the competitive down select of a Best Value TUAV system. A successful Milestone II ASARC was conducted on 21 December 1999, and a TUAV LRIP contract was awarded to the AAI Corporation on 27 December 1999. A successful LRIP program will lead to a MS III decision and award of full rate production. In addition, PEO IEW&S has accelerated fielding of the TUAV system using a second LRIP in FY 01 and increasing the production rate in following years. Continued development of the selected TUAV system will be accomplished through a series of upgrades to incorporate improvements such as extended range and endurance, increased payload weight space and power capability, TCS, TCDL and advanced sensor payloads as they mature and are operationally proven.

## D. Schedule Profile

|   | FY 2000 | FY 2001 | FY 2002 | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 |
|---|---------|---------|---------|---------|---------|---------|---------|---------|
| Conduct System Capabilities Demonstration   | 1Q      |         |         | 0       | 0       | 0       | 0       | 0       |
| Milestone II / LRIP Decision & LRIP Award   | 1Q      |         |         | 0       | 0       | 0       | 0       | 0       |
| First LRIP System Delivery                  |         | 1Q      |         | 0       | 0       | 0       | 0       | 0       |
| Deliver LRIP Systems to Training Base       |         | 2Q      |         | 0       | 0       | 0       | 0       | 0       |
| OPTEMPO Demonstration                       |         | 2Q      |         | 0       | 0       | 0       | 0       | 0       |
| Special In-Process Review/LRIP Decision     |         | 2Q      |         | 0       | 0       | 0       | 0       | 0       |
| IOT&E Preparation and IOT&E                 | 4Q      | 1-3Q    |         | 0       | 0       | 0       | 0       | 0       |
| Field IOT&E LRIP system to IOT&E User       |         | 4Q      |         | 0       | 0       | 0       | 0       | 0       |
| Milestone III / Production Decision         |         | 4Q      |         | 0       | 0       | 0       | 0       | 0       |
| Award Full Rate Production                  |         |         | 1Q      | 0       | 0       | 0       | 0       | 0       |
| TUAV First Unit Equipped (FUE)              |         | 4Q      |         | 0       | 0       | 0       | 0       | 0       |
| Objective Capability Test/Limited User Test |         |         | 4Q      | 0       | 0       | 0       | 0       | 0       |
| Payload Development/Improvements            | 1-4Q    | 1-4Q    | 1-4Q    | 0       | 0       | 0       | 0       | 0       |

| ARMY RDT&E COST ANALYSIS(R-3)                             |                        |   |                |              |   |              |                    |              | June 2001          |                  |            |                          |
|---|------------------------|---|----------------|--------------|---|--------------|--------------------|--------------|--------------------|------------------|------------|--------------------------|
| BUDGET ACTIVITY<br>7 - OPERATIONAL SYSTEMS DEV            |                        |   |                |              | PE NUMBER AND TITLE<br>0305204A - Tactical Unmanned Aerial Vehicles |              |                    |              |                    | PROJECT<br>114   |            |                          |
| I. Product Development                                    | Contract Method & Type | Performing Activity & Location              | Total PYs Cost | FY 2001 Cost | FY 2001 Award Date  | FY 2002 Cost | FY 2002 Award Date | FY 2003 Cost | FY 2003 Award Date | Cost To Complete | Total Cost | Target Value of Contract |
| a . TUAV LRIP Program                                     | Comp / FPIF            | AAI Corporation                             | 38544          | 16786        | 1Q  | 0            |                    | 0            | 0                  | 0                | 0          | 0                        |
| b . Government Furnished Equipment                        | MIPR                   | USAIC/RTTC/USASC BSC/CECOM/PM ATCCS/PM TRCS | 2036           | 0            |   | 0            |                    | 0            | 0                  | 0                | 0          | 0                        |
| c . Advanced Payload Development/Modification/Integration | MIPR                   | PM TESAR                                    | 2918           | 1200         |   | 0            | 1Q                 | 0            | 0                  | 0                | 0          | 0                        |
| d . Digital Data Link                                     | CPFF                   | TRW/TBD                                     | 342            | 0            |   | 0            |                    | 0            | 0                  | 0                | 0          | 0                        |
| e . Objective Capability Assessment/Development           | Comp/FPIF              | AAI Corporation                             | 500            | 411          | 1Q  | 10158        | 1Q                 | 0            | 0                  | 0                | 0          | 0                        |
| f . SIL/MUSE  | MIPR                   | Sys Integration Lab, AMCOM Redstone         | 1500           | 0            |   | 0            |                    | 0            | 0                  | 0                | 0          | 0                        |
| g . TUAV Ground Control Station Architecture              | MIPR                   | Sys Integration Lab, AMCOM Redstone         | 7275           | 0            |   | 0            |                    | 0            | 0                  | 0                | 0          | 0                        |
| h . Institutional Mission Simulator                       | MIPR                   | Sys Integration Lab, AMCOM Redstone         | 2410           | 500          | 1Q  | 0            |                    | 0            | 0                  | 0                | 0          | 0                        |
| i . Tactical Control System                               | PWD                    | AMCOM RDEC Redstone                         | 450            | 250          | 1Q  | 0            |                    | 0            | 0                  | 0                | 0          | 0                        |
|   |                        |   |                |              |   |              |                    |              |                    |                  |            |                          |

| ARMY RDT&E COST ANALYSIS(R-3)  |                              |  |                   |                 |   |                 |                          |                 | June 2001                |                     |               |                                |
|--|------------------------------|--|-------------------|-----------------|---|-----------------|--------------------------|-----------------|--------------------------|---------------------|---------------|--------------------------------|
| BUDGET ACTIVITY<br>7 - OPERATIONAL SYSTEMS DEV   |                              |  |                   |                 | PE NUMBER AND TITLE<br>0305204A - Tactical Unmanned Aerial Vehicles |                 |                          |                 |                          | PROJECT<br>114      |               |                                |
| I. Product Development<br>(continued)  | Contract<br>Method &<br>Type | Performing Activity &<br>Location      | Total<br>PYs Cost | FY 2001<br>Cost | FY 2001<br>Award<br>Date  | FY 2002<br>Cost | FY 2002<br>Award<br>Date | FY 2003<br>Cost | FY 2003<br>Award<br>Date | Cost To<br>Complete | Total<br>Cost | Target<br>Value of<br>Contract |
| j . C4I Interfaces (EPLRS,<br>FBCB2, A2C2  | MIPR                         | Sys Integration Lab,<br>AMCOM Redstone | 0                 | 0               |   | 1000            | 1Q                       | 0               | 0                        | 0                   | 0             | 0                              |
| k . TUAV Source<br>Selection/System Capabilities<br>Demo                                   | Various<br>Methods/Type      | Various AMCOM<br>Contractors           | 7200              | 0               |   | 0               |                          | 0               | 0                        | 0                   | 0             | 0                              |
| l . Army Apache/UAV<br>Interoperability<br>Demonstration                                   | MIPR                         | AMCOM RDEC<br>Redstone                 | 350               | 0               |   | 0               |                          | 0               | 0                        | 0                   | 0             | 0                              |
| m . Outrider Advance<br>Concept Technology<br>Demonstration Bridge<br>Contract             | SS/FPIF                      | Alliant Techsystems,<br>Hopkins, MN    | 10600             | 0               |   | 0               |                          | 0               | 0                        | 0                   | 0             | 0                              |
| n . Hunter UAV non-<br>recurring support   | SS/FPIF                      | TRW, Sierra Vista, AZ                  | 4140              | 0               |   | 0               |                          | 0               | 0                        | 0                   | 0             | 0                              |
| o . Improved EO/IR Payload<br>Modification/Integration<br>Assessment for Demo on<br>Hunter | Comp/Opt                     | AMCOM RDEC<br>Redstone                 | 200               | 0               |   | 0               |                          | 0               | 0                        | 0                   | 0             | 0                              |
| p . 30 Level Maintenance<br>Training   | Comp/FPIF                    | AAI Corporation                        | 0                 | 0               |   | 1300            | 1Q                       | 0               | 0                        | 0                   | 0             | 0                              |
|  |                              |  |                   |                 |   |                 |                          |                 |                          |                     |               |                                |

| ARMY RDT&E COST ANALYSIS(R-3)                  |                              |                                       |                   |                 |   |                 |                          |                 | June 2001                |                     |               |                                |
|--|------------------------------|---------------------------------------|-------------------|-----------------|---|-----------------|--------------------------|-----------------|--------------------------|---------------------|---------------|--------------------------------|
| BUDGET ACTIVITY<br>7 - OPERATIONAL SYSTEMS DEV |                              |                                       |                   |                 | PE NUMBER AND TITLE<br>0305204A - Tactical Unmanned Aerial Vehicles |                 |                          |                 |                          | PROJECT<br>114      |               |                                |
| I. Product Development<br>(continued)          | Contract<br>Method &<br>Type | Performing Activity &<br>Location     | Total<br>PYs Cost | FY 2001<br>Cost | FY 2001<br>Award<br>Date  | FY 2002<br>Cost | FY 2002<br>Award<br>Date | FY 2003<br>Cost | FY 2003<br>Award<br>Date | Cost To<br>Complete | Total<br>Cost | Target<br>Value of<br>Contract |
| Subtotal:                                      |                              |                                       | 78465             | 19147           |   | 12458           |                          | 0               |                          | 0                   | 0             | 0                              |
|  |                              |                                       |                   |                 |   |                 |                          |                 |                          |                     |               |                                |
| II. Support Cost                               | Contract<br>Method &<br>Type | Performing Activity &<br>Location     | Total<br>PYs Cost | FY 2001<br>Cost | FY 2001<br>Award<br>Date  | FY 2002<br>Cost | FY 2002<br>Award<br>Date | FY 2003<br>Cost | FY 2003<br>Award<br>Date | Cost To<br>Complete | Total<br>Cost | Target<br>Value of<br>Contract |
| a . Contractor Engineering<br>Support          | CPFF                         | Various AMCOM<br>Contractor/Locations | 2420              | 1500            | 1Q  | 1095            | 1Q                       | 0               | 0                        | 0                   | 0             | 0                              |
| b . Government Engineering<br>Support          | PWD                          | AMCOM Redstone                        | 2026              | 1024            | 1Q  | 900             | 1Q                       | 0               | 0                        | 0                   | 0             | 0                              |
|  |                              |                                       |                   |                 |   |                 |                          |                 |                          |                     |               |                                |
| Subtotal:                                      |                              |                                       | 4446              | 2524            |   | 1995            |                          | 0               |                          | 0                   | 0             | 0                              |
|  |                              |                                       |                   |                 |   |                 |                          |                 |                          |                     |               |                                |



| ARMY RDT&E COST ANALYSIS(R-3)                           |                        |                                       |                |              |   |              |                    |              | June 2001          |                  |            |                          |
|---|------------------------|---------------------------------------|----------------|--------------|---|--------------|--------------------|--------------|--------------------|------------------|------------|--------------------------|
| BUDGET ACTIVITY<br>7 - OPERATIONAL SYSTEMS DEV          |                        |                                       |                |              | PE NUMBER AND TITLE<br>0305204A - Tactical Unmanned Aerial Vehicles |              |                    |              |                    | PROJECT<br>114   |            |                          |
| III. Test and Evaluation                                | Contract Method & Type | Performing Activity & Location        | Total PYs Cost | FY 2001 Cost | FY 2001 Award Date  | FY 2002 Cost | FY 2002 Award Date | FY 2003 Cost | FY 2003 Award Date | Cost To Complete | Total Cost | Target Value of Contract |
| a . Risk Reduction Testing/ST&E                         | MIPR                   | ATEC/PM/Various AMCOM Contractors     | 8972           | 4559         | 1Q  | 0            |                    | 0            | 0                  | 0                | 0          | 0                        |
| b . Objective Capability Testing / Limited User Testing | MIPR                   | AAI/ATEC/PM/Various AMCOM Contractors | 0              | 0            |   | 4050         | 1Q                 | 0            | 0                  | 0                | 0          | 0                        |
| c . C4I Testing   | MIPR                   | AAI/Various AMCOM Contractors         | 0              | 1980         | 1Q  | 0            |                    | 0            | 0                  | 0                | 0          | 0                        |
| d . OPTEMPO Demo  | MIPR                   | ATEC/PM                               | 0              | 1000         | 1Q  | 0            |                    | 0            | 0                  | 0                | 0          | 0                        |
| e . Data Aquisition System (DAS) Instrumentation Van    | MIPR                   | Redstone Technical Test Center/PM     | 0              | 810          | 1Q  | 0            |                    | 0            | 0                  | 0                | 0          | 0                        |
| f . IOT&E Preparation and Support/Travel                | MIPR                   | ATEC/PM/OGA Ft. Hood, TX              | 0              | 750          | 1Q  | 0            |                    | 0            | 0                  | 0                | 0          | 0                        |
|   |                        |                                       |                |              |   |              |                    |              |                    |                  |            |                          |
| Subtotal:   |                        |                                       | 8972           | 9099         |   | 4050         |                    | 0            |                    | 0                | 0          | 0                        |
|   |                        |                                       |                |              |   |              |                    |              |                    |                  |            |                          |

| ARMY RDT&E COST ANALYSIS(R-3)                  |                        |                                |                |              |   |              |                    |              | June 2001          |                  |            |                          |
|--|------------------------|--------------------------------|----------------|--------------|---|--------------|--------------------|--------------|--------------------|------------------|------------|--------------------------|
| BUDGET ACTIVITY<br>7 - OPERATIONAL SYSTEMS DEV |                        |                                |                |              | PE NUMBER AND TITLE<br>0305204A - Tactical Unmanned Aerial Vehicles |              |                    |              |                    | PROJECT<br>114   |            |                          |
| IV. Management Services                        | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2001 Cost | FY 2001 Award Date  | FY 2002 Cost | FY 2002 Award Date | FY 2003 Cost | FY 2003 Award Date | Cost To Complete | Total Cost | Target Value of Contract |
| a . Program Mgt Personnel                      |                        | PM UAV Redstone                | 3393           | 1076         | 1Q  | 1000         | 1Q                 | 0            | 0                  | 0                | 0          | 0                        |
|  |                        |                                |                |              |   |              |                    |              |                    |                  |            |                          |
| Subtotal:                                      |                        |                                | 3393           | 1076         |   | 1000         |                    | 0            |                    | 0                | 0          | 0                        |
|  |                        |                                |                |              |   |              |                    |              |                    |                  |            |                          |
| Project Total Cost:                            |                        |                                | 95276          | 31846        |   | 19503        |                    | 0            |                    | 0                | 0          | 0                        |
|  |                        |                                |                |              |   |              |                    |              |                    |                  |            |                          |

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| BUDGET ACTIVITY<br>7 - OPERATIONAL SYSTEMS DEV  |  |                   |                     | PE NUMBER AND TITLE<br>0305204A - Tactical Unmanned Aerial Vehicles |                     |                     |                     | PROJECT<br>11A      |                     |                     |            |
| COST (In Thousands)   |  | FY 2000<br>Actual | FY 2001<br>Estimate | FY 2002<br>Estimate   | FY 2003<br>Estimate | FY 2004<br>Estimate | FY 2005<br>Estimate | FY 2006<br>Estimate | FY 2007<br>Estimate | Cost to<br>Complete | Total Cost |
| 11A   | ADVANCED PAYLOAD DEVELOPMENT & SUPPORT | 0                 | 0                   | 16400   | 0                   | 0                   | 0                   | 0                   | 0                   | 0                   | 0          |
| <p><b><u>A. Mission Description and Budget Item Justification:</u></b> The Tactical Unmanned Aerial Vehicle (TUAV), provides Army brigades/battalions with dedicated day/night, reconnaissance, surveillance and target acquisition (RSTA) and intelligence. TUAV provides the tactical warfighting commander with critical battlefield information in the rapid cycle time required for success at the tactical level. Near term efforts will include the transition of current mature technologies into an operational capability, while maturing existing technology initiatives to increase the force multiplying effects of the TUAV. To support these efforts, the funds will be used to establish the infrastructure to evaluate the maturity of the technology efforts and transition an employable TUAV capability. Specifics include entering development and fielding of the TSM UAV's top 5 priorities. These include SAR/MTI, Communication Relay Payload, Laser Designation, and Objective EO/IR. To support these efforts, a modeling and simulation capability/process is being developed to assess the operational benefit of these advanced technologies. Future initiatives will be focused on the transition of technologies that will directly support the Army's objective force. These include the development and fielding of countermine, counter camouflage, NBC and other specialty payloads as appropriate.</p> |  |                   |                     |   |                     |                     |                     |                     |                     |                     |            |
| <p><b><u>FY 2002 Planned Program</u></b></p> <ul style="list-style-type: none"><li>• 2100 Program Management Support</li><li>• 8700 SAR/MTI Deveolpment/Modifications/Integration</li><li>• 1600 Advanced Payload Modeling and Simulation</li><li>• 2500 Objective EO/IR Operational Capability Assessment</li><li>• 700 Laser Designator feasibility assessment</li><li>• 200 Communication Relay Payload A-Kit Development</li><li>• 600 Payload Test Bed to support DT/OT of advanced development integration and modification</li></ul> <p>Total 16400</p>  |  |                   |                     |   |                     |                     |                     |                     |                     |                     |            |

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June 2001

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PE NUMBER AND TITLE

0305204A - Tactical Unmanned Aerial Vehicles

PROJECT

11A

**B. Other Program Funding Summary:** Not applicable for this item.

Procurement funding in support of these RDTE efforts are now planned as part of the TUAV Procurement funding line (BA0330). Efforts have also begun to establish a separate funding line for the Advanced Payloads.

**C. Acquisition Strategy:** 1. SAR/MTI will enter MS-B during FY-02 and award an SDD contract for the Design/Modification and Integration into the TUAV. Upon successful DT and MS-C decision, LRIP option will be exercised for test articles to support a Limited User Test (LUT) in FY-03. After a successful LUT, Full Rate Production will begin with deliveries in FY-05.

2. Multifunctional EO/IR payload will be pursued for the TUAV. In FY-02, will enter at MS-A Component Advanced Development and during this phase will codify requirements, demonstrate the objective EO/IR capability, and conduct feasibility assessments for Laser designator/Illuminator and countermeasure capabilities. In FY-03 award an SDD contract for the Design/Modification and Integration into the TUAV. Upon successful DT and MS-C decision, LRIP option will be exercised for articles to support deliveries in FY-05. Incorporate increased capabilities through a block upgrade approach (Laser, Countermeasure, etc) as the technology matures and is operational proven.

| <b>D. Schedule Profile</b>                   | FY 2000 | FY 2001 | FY 2002 | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 |
|--|---------|---------|---------|---------|---------|---------|---------|---------|
| SAR/MTI                                      |         |         |         | 0       | 0       | 0       | 0       | 0       |
| MS B/ SDD Decision and Award                 |         |         | 1Q      | 0       | 0       | 0       | 0       | 0       |
| DT Test Article Deliveries and Testing       |         |         |         | 0       | 0       | 0       | 0       | 0       |
| MS C/ LRIP Option Exercise                   |         |         |         | 0       | 0       | 0       | 0       | 0       |
| Delivery of LRIP Systems and LUT             |         |         |         | 0       | 0       | 0       | 0       | 0       |
| Award FRP Contract                           |         |         |         | 0       | 0       | 0       | 0       | 0       |
| FRP Deliveries to TUAV                       |         |         |         | 0       | 0       | 0       | 0       | 0       |
| EO/IR  |         |         |         | 0       | 0       | 0       | 0       | 0       |
| MS A   |         |         | 1Q      | 0       | 0       | 0       | 0       | 0       |
| Conduct Operational Capabilities Assessment  |         |         | 1-3Q    | 0       | 0       | 0       | 0       | 0       |
| Laser Designator Technical Feasibility Study |         |         | 1-2Q    | 0       | 0       | 0       | 0       | 0       |
| MS B   |         |         |         | 0       | 0       | 0       | 0       | 0       |
| Contract Award for SDD                       |         |         |         | 0       | 0       | 0       | 0       | 0       |

|  |                  |
|--|------------------|
| <b>ARMY RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)</b> | <b>June 2001</b> |
|--|------------------|

**June 2001**

| BUDGET ACTIVITY                    |  |
|------------------------------------|--|
| <b>7 - OPERATIONAL SYSTEMS DEV</b> |  |

|   |            |
|---|------------|
| PE NUMBER AND TITLE                                 | PROJECT    |
| <b>0305204A - Tactical Unmanned Aerial Vehicles</b> | <b>11A</b> |

11A

#### **D. Schedule Profile (continued)**

FY 2000

FY 2001

|  |         |
|--|---------|
|  | FY 2002 |
|--|---------|

|  |         |
|--|---------|
|  | FY 2003 |
|--|---------|

|  |         |
|--|---------|
|  | FY 2004 |
|--|---------|

|  |         |
|--|---------|
|  | FY 2005 |
|--|---------|

|  |         |
|--|---------|
|  | FY 2006 |
|--|---------|

|  |         |
|--|---------|
|  | FY 2007 |
|--|---------|

Complete DT and LUT on Shadow 200

MS C and exercise LRIP Option

## LRIP Deliveries

FRP Contract Award

FRP Deliveries

| ARMY RDT&E COST ANALYSIS(R-3)                           |                        |                                |                |              |   |              |                    |              | June 2001          |                  |            |                          |
|---|------------------------|--------------------------------|----------------|--------------|---|--------------|--------------------|--------------|--------------------|------------------|------------|--------------------------|
| BUDGET ACTIVITY<br>7 - OPERATIONAL SYSTEMS DEV          |                        |                                |                |              | PE NUMBER AND TITLE<br>0305204A - Tactical Unmanned Aerial Vehicles |              |                    |              |                    | PROJECT<br>11A   |            |                          |
| I. Product Development                                  | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2001 Cost | FY 2001 Award Date  | FY 2002 Cost | FY 2002 Award Date | FY 2003 Cost | FY 2003 Award Date | Cost To Complete | Total Cost | Target Value of Contract |
| a . SAR/MTI Program                                     | SS/CPIF                | Northrop-Grumman Baltimore, MD | 0              | 0            | 1Q  | 8700         |                    | 0            | 0                  | 0                | 0          | 0                        |
| b . Advanced Payload Modeling and Simulation            | SS/FFP                 | Teledyne Brown, Huntsville, AL | 0              | 0            | 1Q  | 800          |                    | 0            | 0                  | 0                | 0          | 0                        |
| c . Advanced Payload Modeling and Simulation            | MIPR                   | TRAC White Sands Missile Range | 0              | 0            | 1Q  | 800          |                    | 0            | 0                  | 0                | 0          | 0                        |
| d . Objective EO/IR Operational Capabilities Assessment | PWD                    | CECOM NVESD Ft. Monmouth NJ    | 0              | 0            | 2Q  | 2500         |                    | 0            | 0                  | 0                | 0          | 0                        |
| e . Laser Designator Feasibility Assessment             | Comp/CPFF              | TBD                            | 0              | 0            | 2Q  | 700          |                    | 0            | 0                  | 0                | 0          | 0                        |
| f . CRP A-Kit Development                               | MIPR                   | PM TUAV                        | 0              | 0            | 2Q  | 200          |                    | 0            | 0                  | 0                | 0          | 0                        |
| g . Payload Test Bed                                    | PWD                    | CECOM I2WD, Ft. Monmouth NJ    | 0              | 0            | 2Q  | 600          |                    | 0            | 0                  | 0                | 0          | 0                        |
|   |                        |                                |                |              |   |              |                    |              |                    |                  |            |                          |
| Subtotal:   |                        |                                | 0              | 0            |   | 14300        |                    | 0            |                    | 0                | 0          | 0                        |
|   |                        |                                |                |              |   |              |                    |              |                    |                  |            |                          |

| ARMY RDT&E COST ANALYSIS(R-3)                  |                        |  |                |              |   |              |                    |              | June 2001          |                  |            |                          |
|--|------------------------|--|----------------|--------------|---|--------------|--------------------|--------------|--------------------|------------------|------------|--------------------------|
| BUDGET ACTIVITY<br>7 - OPERATIONAL SYSTEMS DEV |                        |  |                |              | PE NUMBER AND TITLE<br>0305204A - Tactical Unmanned Aerial Vehicles |              |                    |              |                    | PROJECT<br>11A   |            |                          |
| II. Support Cost                               | Contract Method & Type | Performing Activity & Location             | Total PYs Cost | FY 2001 Cost | FY 2001 Award Date  | FY 2002 Cost | FY 2002 Award Date | FY 2003 Cost | FY 2003 Award Date | Cost To Complete | Total Cost | Target Value of Contract |
| a . Engineering Support                        | CPFF/PWD               | Various CECOM Contractors and RDEC Support | 0              | 0            | 1Q  | 1900         |                    | 0            | 0                  | 0                | 0          | 0                        |
|  |                        |  |                |              |   |              |                    |              |                    |                  |            |                          |
| Subtotal:                                      |                        |  | 0              | 0            |   | 1900         |                    | 0            |                    | 0                | 0          | 0                        |
|  |                        |  |                |              |   |              |                    |              |                    |                  |            |                          |
| III. Test and Evaluation                       | Contract Method & Type | Performing Activity & Location             | Total PYs Cost | FY 2001 Cost | FY 2001 Award Date  | FY 2002 Cost | FY 2002 Award Date | FY 2003 Cost | FY 2003 Award Date | Cost To Complete | Total Cost | Target Value of Contract |
|  |                        |  |                |              |   |              |                    |              |                    |                  |            |                          |
| Subtotal:                                      |                        |  | 0              | 0            |   | 0            |                    | 0            |                    | 0                | 0          | 0                        |
|  |                        |  |                |              |   |              |                    |              |                    |                  |            |                          |

| ARMY RDT&E COST ANALYSIS(R-3)                  |                        |                                |                |              |   |              |                    |              | June 2001          |                  |            |                          |
|--|------------------------|--------------------------------|----------------|--------------|---|--------------|--------------------|--------------|--------------------|------------------|------------|--------------------------|
| BUDGET ACTIVITY<br>7 - OPERATIONAL SYSTEMS DEV |                        |                                |                |              | PE NUMBER AND TITLE<br>0305204A - Tactical Unmanned Aerial Vehicles |              |                    |              |                    | PROJECT<br>11A   |            |                          |
| IV. Management Services                        | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2001 Cost | FY 2001 Award Date  | FY 2002 Cost | FY 2002 Award Date | FY 2003 Cost | FY 2003 Award Date | Cost To Complete | Total Cost | Target Value of Contract |
| a . Program Mgt Personnel                      |                        | PM TESAR, Ft. Monmouth, NJ     | 0              | 0            | 1Q  | 200          |                    | 0            | 0                  | 0                | 0          | 0                        |
|  |                        |                                |                |              |   |              |                    |              |                    |                  |            |                          |
| Subtotal:                                      |                        |                                | 0              | 0            |   | 200          |                    | 0            |                    | 0                | 0          | 0                        |
|  |                        |                                |                |              |   |              |                    |              |                    |                  |            |                          |
| Project Total Cost:                            |                        |                                | 0              | 0            |   | 16400        |                    | 0            |                    | 0                | 0          | 0                        |
|  |                        |                                |                |              |   |              |                    |              |                    |                  |            |                          |



| ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)   |  |                   |                     |   |                     |                     | June 2001           |                     |                     |                     |            |
|---|--|-------------------|---------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------|
| BUDGET ACTIVITY<br>7 - OPERATIONAL SYSTEMS DEV  |  |                   |                     | PE NUMBER AND TITLE<br>0305204A - Tactical Unmanned Aerial Vehicles |                     |                     |                     |                     | PROJECT<br>123      |                     |            |
| COST (In Thousands)   |  | FY 2000<br>Actual | FY 2001<br>Estimate | FY 2002<br>Estimate   | FY 2003<br>Estimate | FY 2004<br>Estimate | FY 2005<br>Estimate | FY 2006<br>Estimate | FY 2007<br>Estimate | Cost to<br>Complete | Total Cost |
| 123   | JOINT TECHNOLOGY CENTER SYSTEM<br>INTEGRATION (JMIP) | 0                 | 2264                | 2307  | 0                   | 0                   | 0                   | 0                   | 0                   | 0                   | 0          |
| <p><b><u>A. Mission Description and Budget Item Justification:</u></b>The Joint Technology Center/System Integration Laboratory (JTC/SIL) is a joint facility that develops, integrates and supports the enhancement of its Multiple Unified Simulation Environment (MUSE) capability for Army systems and operational concepts, primarily for the Tactical UAV Project Office. The JTC/SIL conducts prototype hardware and software development (TUAV Tactical Unmanned Control System (TUCS), TUAV Institutional Mission Simulation (IMS) Trainer, TUAV C4I module), modeling and simulation support. The MUSE provides for the development of real-time, operator in-the-loop simulations that are capable of tactical Hardware-In-the-Loop (HWIL) interoperability for multiple intelligence systems that may be integrated with larger simulations in support of Service training and exercises. MUSE development provides a realistic operational environment that supports a wide range of C4I applications. This project funds the management of the JTC/SIL and MUSE enhancements. This system supports the Legacy to Objective transition path of the Transformatoin Campaign Plan (TCP).</p> |  |                   |                     |   |                     |                     |                     |                     |                     |                     |            |
| <p><b><u>FY 2000 Accomplishments</u></b></p> <p>Program funded in project D114.</p>   |  |                   |                     |   |                     |                     |                     |                     |                     |                     |            |
| <p><b><u>FY 2001 Planned Program</u></b></p> <ul style="list-style-type: none"><li>150 Initiate Moving Target Indicator/Fixed Target Indicator (MTI/FTI) Sensor Simulation Development/Upgrade SAR Simulation</li><li>175 MUSE Remote Support Capability</li><li>50 Provide Direct JSTARS Common Ground Station (CGS) Interface</li><li>150 Develop MUSE Fixed Target Damage State Visualization</li><li>50 Technical Suport of MUSE Integration with IEWTPT</li><li>195 Upgrade HLA Certification and DITSCAP</li><li>125 MUSE Hardware Consolidation into Single PC-Based Platform</li></ul>  |  |                   |                     |   |                     |                     |                     |                     |                     |                     |            |

**ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)****June 2001**

BUDGET ACTIVITY

**7 - OPERATIONAL SYSTEMS DEV**

PE NUMBER AND TITLE

**0305204A - Tactical Unmanned Aerial Vehicles**

PROJECT

**123****FY 2001 Planned Program (Continued)**

- 100 Initiate MUSE TUAV Flight Performance Model Verification and Validation Process
- 120 Provide MUSE Configuration Management and Help Desk Services
- 830 MUSE Equipment
- 319 JTC/SIL Management

Total 2264

**FY 2002 Planned Program**

- 150 Develop and integrate Tactical Common Data Link into MUSE in support TUAV ORD
- 240 Develop and upgrade Terrain and Target databases
- 175 MUSE Remote Support Capability
- 120 Upgrade HLA Certification and DITSCAP
- 50 Technical support of MUSE integration with IEWTPT
- 190 MUSE TUAV Flight Performance Model Verification and Validation Process
- 300 MUSE Configuration Management and Help Desk Services
- 785 MUSE Equipment
- 300 JTC/SIL Management
- -3 Due to DA realignment and technical changes to the database, the above effort shows accomplishment amount for \$2.307M, however, the amount was for \$2.310M

Total 2307

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

June 2001

BUDGET ACTIVITY

**7 - OPERATIONAL SYSTEMS DEV**

PE NUMBER AND TITLE

**0305204A - Tactical Unmanned Aerial Vehicles**

PROJECT

**123**

**B. Other Program Funding Summary:** Not applicable for this item.

Other Air Force and Navy funds are provided for the development of JTC/SIL MUSE.

**C. Acquisition Strategy:** Continued MUSE development will be accomplished through a combination of Government in-house functional directorate support and contractor support using a variety of existing RDEC contract vehicles and the OMNIBUS 2000 contract.

| <b><u>D. Schedule Profile</u></b>       | FY 2000 | FY 2001 | FY 2002 | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 |
|---|---------|---------|---------|---------|---------|---------|---------|---------|
| JTC/SIL MUSE Enhancement and Management |         | 2-4Q    | 1-4Q    | 0       | 0       | 0       | 0       | 0       |

| ARMY RDT&E COST ANALYSIS(R-3)                                 |                        |   |                |              |   |              |                    |              | June 2001          |                  |            |                          |
|---|------------------------|---|----------------|--------------|---|--------------|--------------------|--------------|--------------------|------------------|------------|--------------------------|
| BUDGET ACTIVITY<br>7 - OPERATIONAL SYSTEMS DEV                |                        |   |                |              | PE NUMBER AND TITLE<br>0305204A - Tactical Unmanned Aerial Vehicles |              |                    |              |                    | PROJECT<br>123   |            |                          |
| I. Product Development  | Contract Method & Type | Performing Activity & Location  | Total PYs Cost | FY 2001 Cost | FY 2001 Award Date  | FY 2002 Cost | FY 2002 Award Date | FY 2003 Cost | FY 2003 Award Date | Cost To Complete | Total Cost | Target Value of Contract |
| a . Initiate MTI/FTI Sensor Sim Develop/Upgrade SAR           | SS/CPFF                | Draper Laboratory/Cambridge, MA   | 0              | 150          | 3Q  | 0            |                    | 0            | 0                  | 0                | 0          | 0                        |
| b . MUSE Remote Support Capability                            | SS/CPFF                | ITC/Arlington, VA   | 0              | 175          | 3Q  | 175          | 1Q                 | 0            | 0                  | 0                | 0          | 0                        |
| c . Develop MUSE Fixed Target Damage Site Visualization       | SS/CPFF                | ITC/Arlington, VA   | 0              | 150          | 3Q  | 0            |                    | 0            | 0                  | 0                | 0          | 0                        |
| d . Upgrade HLA Certification for DITSCAP                     | SS/CPFF                | ITC/Arlington, VA   | 0              | 195          | 3Q  | 120          | 1Q                 | 0            | 0                  | 0                | 0          | 0                        |
| e . MUSE Equipment  | C/FFP                  | TBD   | 0              | 673          | 3Q  | 627          | 1Q                 | 0            | 0                  | 0                | 0          | 0                        |
| f . MUSE Hardware Consolidation into Single PC-Based Platform | SS/CPFF                | ITC/Arlington, VA   | 0              | 125          | 3Q  | 0            |                    | 0            | 0                  | 0                | 0          | 0                        |
| g . Develop & Integrate TCDL into MUSE in Support of TUAV ORD | SS/CPFF                | ITC/Arlington   | 0              | 0            |   | 150          | 1Q                 | 0            | 0                  | 0                | 0          | 0                        |
| h . Develop & Upgrade Terrain & Target Databases              | SS/CPFF                | ITC/Arlington, VA / Quality Research/HSV, AL / SAIC/HSV, AL / Draper Laboratory | 0              | 0            |   | 240          | 1Q                 | 0            | 0                  | 0                | 0          | 0                        |
|   |                        |   |                |              |   |              |                    |              |                    |                  |            |                          |

| ARMY RDT&E COST ANALYSIS(R-3)  |                              |                                   |                   |                 |   |                 |                          |                 | June 2001                |                     |               |                                |
|--|------------------------------|-----------------------------------|-------------------|-----------------|---|-----------------|--------------------------|-----------------|--------------------------|---------------------|---------------|--------------------------------|
| BUDGET ACTIVITY<br>7 - OPERATIONAL SYSTEMS DEV   |                              |                                   |                   |                 | PE NUMBER AND TITLE<br>0305204A - Tactical Unmanned Aerial Vehicles |                 |                          |                 |                          | PROJECT<br>123      |               |                                |
| I. Product Development<br>(continued)  | Contract<br>Method &<br>Type | Performing Activity &<br>Location | Total<br>PYs Cost | FY 2001<br>Cost | FY 2001<br>Award<br>Date  | FY 2002<br>Cost | FY 2002<br>Award<br>Date | FY 2003<br>Cost | FY 2003<br>Award<br>Date | Cost To<br>Complete | Total<br>Cost | Target<br>Value of<br>Contract |
| i . Incorporate New<br>Technology Sensors &<br>Platforms into MUSE   | SS/CPFF                      | ITC/Arlington, VA                 | 0                 | 0               |   | 0               |                          | 0               | 0                        | 0                   | 0             | 0                              |
| j . Integrate Weapon<br>Employment Capabilities into<br>MUSE   | C/FFP                        | TBD                               | 0                 | 0               |   | 0               |                          | 0               | 0                        | 0                   | 0             | 0                              |
| k . Evaluate and Integrate<br>New Visualization<br>Technologies into MUSE  | C/FFP                        | TBD                               | 0                 | 0               |   | 0               |                          | 0               | 0                        | 0                   | 0             | 0                              |
| l . Due to DA<br>realignment&technical<br>changes to the database the<br>following figures reflect the<br>difference |                              |                                   | 0                 | -1              | 1Q  | -3              | 1Q                       | 0               | 0                        | 0                   | 0             | 0                              |
|  |                              |                                   |                   |                 |   |                 |                          |                 |                          |                     |               |                                |
| Subtotal:  |                              |                                   | 0                 | 1467            |   | 1309            |                          | 0               |                          | 0                   | 0             | 0                              |
|  |                              |                                   |                   |                 |   |                 |                          |                 |                          |                     |               |                                |

| ARMY RDT&E COST ANALYSIS(R-3)                                |                        |  |                |              |   |              |                    |              | June 2001          |                  |            |                          |
|--|------------------------|--|----------------|--------------|---|--------------|--------------------|--------------|--------------------|------------------|------------|--------------------------|
| BUDGET ACTIVITY<br>7 - OPERATIONAL SYSTEMS DEV               |                        |  |                |              | PE NUMBER AND TITLE<br>0305204A - Tactical Unmanned Aerial Vehicles |              |                    |              |                    | PROJECT<br>123   |            |                          |
| II. Support Cost   | Contract Method & Type | Performing Activity & Location           | Total PYs Cost | FY 2001 Cost | FY 2001 Award Date  | FY 2002 Cost | FY 2002 Award Date | FY 2003 Cost | FY 2003 Award Date | Cost To Complete | Total Cost | Target Value of Contract |
| a . Provide Direct JSTARS CGS Interface                      | SS/CPFF                | ITC/Arlington, VA                        | 0              | 50           | 3Q  | 0            |                    | 0            | 0                  | 0                | 0          | 0                        |
| b . Technical Support of MUSE Integration with IEWTPT        | C/CPFF                 | SAIC/Huntsville, AL                      | 0              | 50           | 3Q  | 50           | 1Q                 | 0            | 0                  | 0                | 0          | 0                        |
| c . Initiate MUSE TUAV Flight Performance Model V&V Process  | C/CPFF                 | SAIC/Huntsville, AL                      | 0              | 100          | 3Q  | 190          | 1Q                 | 0            | 0                  | 0                | 0          | 0                        |
| d . Provide MUSE Configuration Mgt and Help Desk Services    | C/CPFF                 | SAIC/Huntsville, AL / ITC, Arlington, VA | 0              | 120          | 3Q  | 300          | 1Q                 | 0            | 0                  | 0                | 0          | 0                        |
| e . JTC/SIL Management                                       | C/CPFF                 | TBD                                      | 0              | 93           | 3Q  | 60           | 1Q                 | 0            | 0                  | 0                | 0          | 0                        |
| f . MUSE Equipment   | C/CPFF                 | SAIC/Huntsville, AL                      | 0              | 158          | 3Q  | 158          | 1Q                 | 0            | 0                  | 0                | 0          | 0                        |
| g . Incorporate New Technology Sensors & Platforms into MUSE | C/CPFF                 | SAIC/Huntsville, AL                      | 0              | 0            |   | 0            |                    | 0            | 0                  | 0                | 0          | 0                        |
|  |                        |  |                |              |   |              |                    |              |                    |                  |            |                          |
| Subtotal:  |                        |  | 0              | 571          |   | 758          |                    | 0            |                    | 0                | 0          | 0                        |
|  |                        |  |                |              |   |              |                    |              |                    |                  |            |                          |

| ARMY RDT&E COST ANALYSIS(R-3)                  |                        |                                |                |              |   |              |                    |              | June 2001          |                  |            |                          |
|--|------------------------|--------------------------------|----------------|--------------|---|--------------|--------------------|--------------|--------------------|------------------|------------|--------------------------|
| BUDGET ACTIVITY<br>7 - OPERATIONAL SYSTEMS DEV |                        |                                |                |              | PE NUMBER AND TITLE<br>0305204A - Tactical Unmanned Aerial Vehicles |              |                    |              |                    | PROJECT<br>123   |            |                          |
| III. Test and Evaluation                       | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2001 Cost | FY 2001 Award Date  | FY 2002 Cost | FY 2002 Award Date | FY 2003 Cost | FY 2003 Award Date | Cost To Complete | Total Cost | Target Value of Contract |
| a . TBD  | TBD                    | TBD                            | 0              | 0            |   | 0            |                    | 0            | 0                  | 0                | 0          | 0                        |
|  |                        |                                |                |              |   |              |                    |              |                    |                  |            |                          |
| Subtotal:                                      |                        |                                | 0              | 0            |   | 0            |                    | 0            |                    | 0                | 0          | 0                        |
|  |                        |                                |                |              |   |              |                    |              |                    |                  |            |                          |
| IV. Management Services                        | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2001 Cost | FY 2001 Award Date  | FY 2002 Cost | FY 2002 Award Date | FY 2003 Cost | FY 2003 Award Date | Cost To Complete | Total Cost | Target Value of Contract |
| a . JTC/SIL Management Personnel               |                        | JTC/SIL/Redstone Arsenal, AL   | 0              | 226          | 2-4Q  | 240          | 1-4Q               | 0            | 0                  | 0                | 0          | 0                        |
|  |                        |                                |                |              |   |              |                    |              |                    |                  |            |                          |
| Subtotal:                                      |                        |                                | 0              | 226          |   | 240          |                    | 0            |                    | 0                | 0          | 0                        |
|  |                        |                                |                |              |   |              |                    |              |                    |                  |            |                          |
| Project Total Cost:                            |                        |                                | 0              | 2264         |   | 2307         |                    | 0            |                    | 0                | 0          | 0                        |
|  |                        |                                |                |              |   |              |                    |              |                    |                  |            |                          |